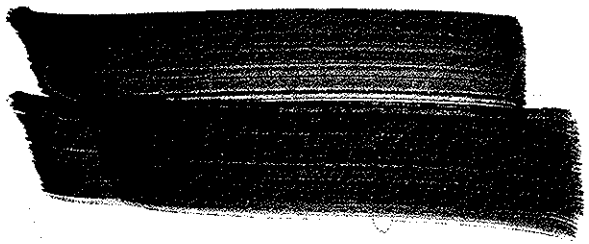
Title of Instructional Materials: Glencoe Math Connects Course 3

Grade Level: Grade 8

Summary of Glencoe Course 3

Overall Rating: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:** The 8th grade edition does an excellent job of teaching the Common Core standards, if the supplemental materials are used. The website is wonderful for student and family use. This textbook is weak in Statistics and Probability but very strong overall. Algebra is very well-developed. The real-world examples are age-appropriate and interesting to students.	Important Mathematical Ideas: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:**
Skills and Procedures: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:**	Mathematical Relationships: ☐ Weak (1-2) ☐ Moderate (2-3) ☒ Strong (3-4) **Summary / Justification / Evidence:**

INDIANA'S EDUCATION ROUNDTABLE | 2010



Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Grade 8

a project of
The Charles A. Dana Center
at the University of Texas at Austin

Instructional Materials Analysis and Selection

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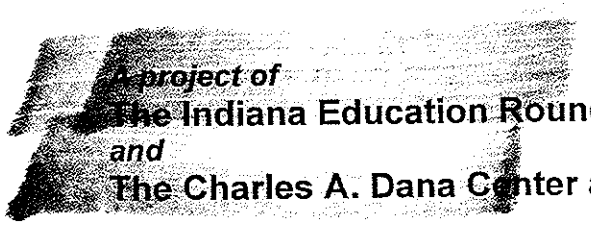
Assessing Content Alignment to the Common Core State Standards for Mathematics



A project of
The Indiana Education Roundtable, The Indiana Department of Education,
and
The Charles A. Dana Center at The University of Texas at Austin

2010–2011

Mathematical Relationships: Understanding the scoring

	Superficially Developed	Well Developed
Development	1 — 2 — 3 — 4 Mathematical relationships are not evident, and mathematics appears as a series of discrete skills and ideas.	Mathematical relationships are evident in such a way as to build understanding of mathematics as a unified whole.
Connections	1 — 2 — 3 — 4 Mathematical relationships are not required of students or are used primarily to provide a context for the practice of skills or procedures — words wrapped around drill.	Mathematical relationships are integrated with important mathematical ideas, and are integral in required activities, problems, and applications.
Rigor and Depth	1 — 2 — 3 — 4 Mathematical relationships require the use of skills and procedures, but rarely require the use of any important mathematical ideas or connections outside mathematics.	Mathematical relationships require the broad use of mathematics and integrate the need for important mathematical ideas, skills, and procedures, as well as connections outside mathematics.

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Indicate the chapter(s), section(s), or page(s) reviewed.

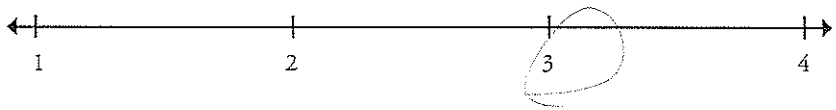
1-1, 1-8, 3-6, 7-2, 9-8

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Found

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

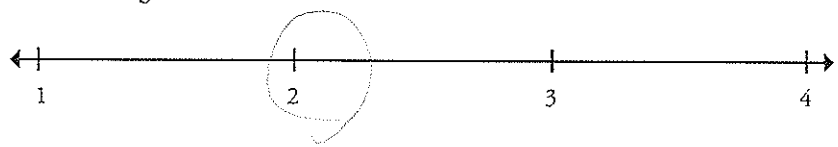
Indicate the chapter(s), section(s), or page(s) reviewed.

4-3, 7-6, 8-4, 9-2, 9-3

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), or page(s) reviewed.

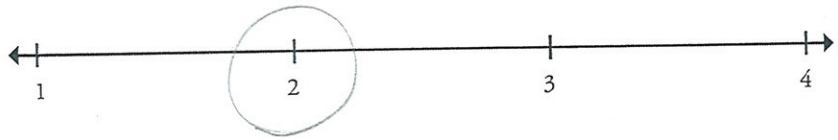
3-5, Ext 6-4, 7-5, 8-2, Ext 9-5

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Some found throughout

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

3-3, 4-6, 8-5, 9-9, 10-3

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

found

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

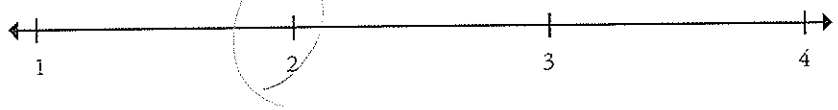
Indicate the chapter(s), section(s), or page(s) reviewed.

3-7, Ext. 4-2, Exp 8-4, Ext 9-6, Ext 9-9

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

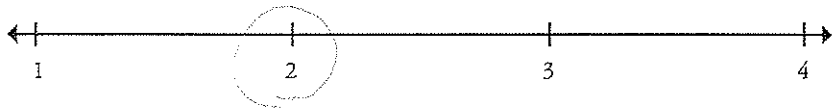
Indicate the chapter(s), section(s), or page(s) reviewed.

2-9, 3-2, 2-6, 9-10, Ex., 10-4

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

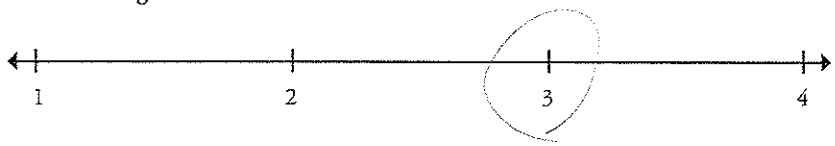
3-4, 4-4, Ex 4-7, Ex 6-1, 7-3

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Found throughout

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y-2)/(x-1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x-1)(x+1)$, $(x-1)(x^2+x+1)$, and $(x-1)(x^3+x2+x+1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

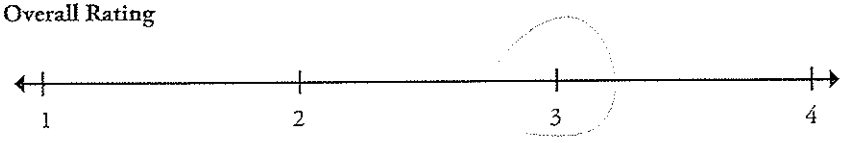
2-8, 6-2, 9-1, 9-4, 10-5

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Found throughout

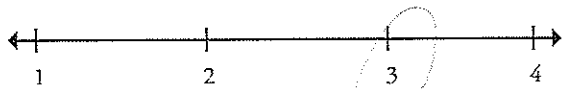
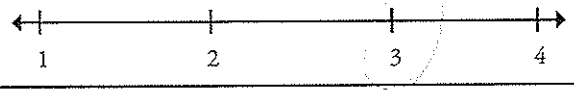
Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

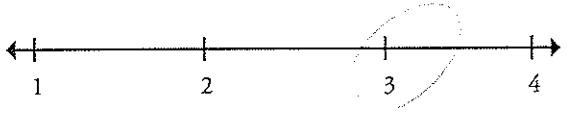
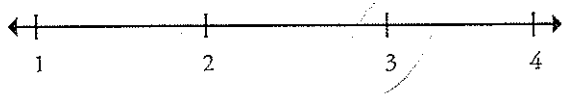
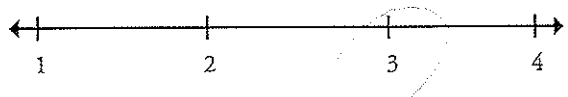
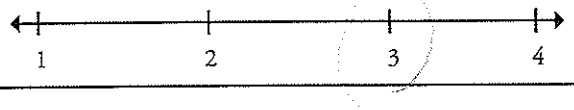
MATHEMATICS: GRADE 8 – THE NUMBER SYSTEM – 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.NS.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 2-1, 3-4	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

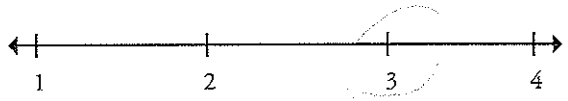
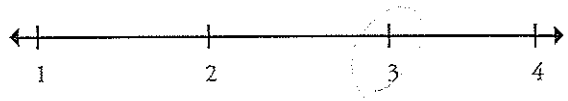
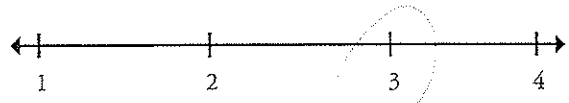
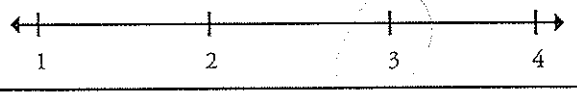
MATHEMATICS: GRADE 8 – THE NUMBER SYSTEM – 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.NS.2 Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 3-2, 3-4, Ext 3-6	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** RDW 2 **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** — Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

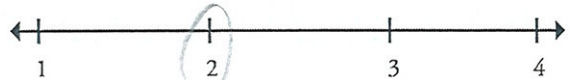
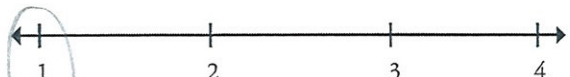
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,* $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Found
Indicate the chapter(s), section(s), and/or page(s) reviewed. 10-5, 10-6, 10-7 <—	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

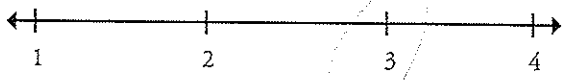
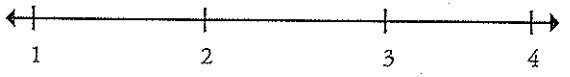
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 3-1, 3-2, 3-4, 3-5, 3-6, 3-7, 10-8, L.A. 4	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Rest found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Solving small cube roots Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

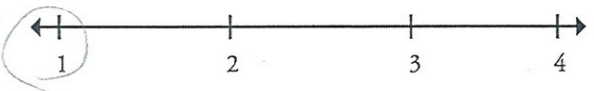
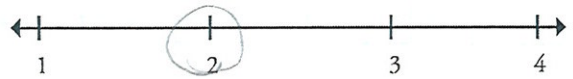
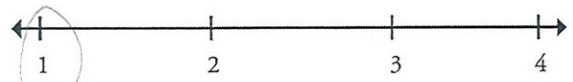
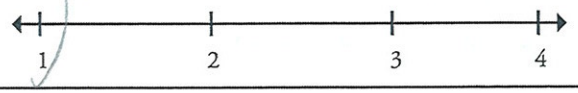
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 2-10, 6 lessons 1+2	Important Mathematical Ideas Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Found
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

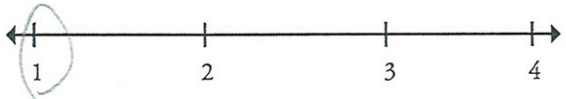
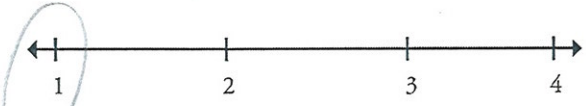
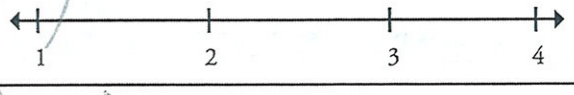
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C lessons 1 + 2	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Also, no combination of standard + scientific notation
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Understand the connections between proportional relationships, lines, and linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 4-4, 9-4, 9-5, Ext 9-5, 9-6, Ext 9-6	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** The rest found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Understand the connections between proportional relationships, lines, and linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.6 Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at *b*. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-5, Ext 9-5, 9-6, Ext 9-6	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Found
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.7a 7. Solve linear equations in one variable. a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers). **Indicate the chapter(s), section(s), and/or page(s) reviewed.** c Lesson 3	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Fair **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** — Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

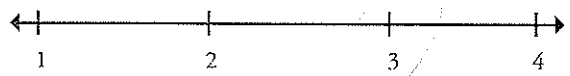
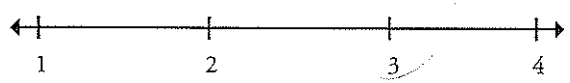
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.7b 7. Solve linear equations in one variable. b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 2-7, 8-6, 8-3, Exp 8-4, 3-1, C Lessons 3 – 4	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

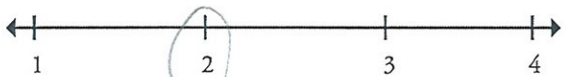
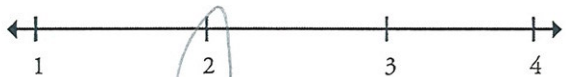
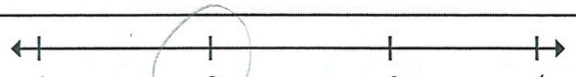
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.8a 8. Analyze and solve pairs of simultaneous linear equations. a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-7, CLESSON 10	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.8b 8. Analyze and solve pairs of simultaneous linear equations. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C Lesson 5	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Rest found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

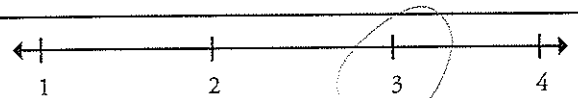
MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.EE.8c 8. Analyze and solve pairs of simultaneous linear equations. c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-7, 8 Lessons 5 + 6	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

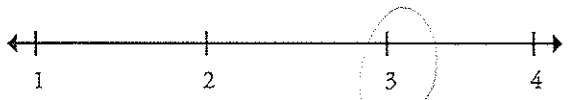
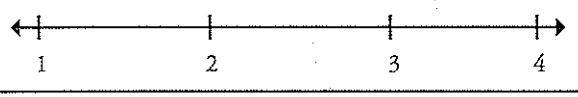
MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.[1] 1 Function notation is not required in Grade 8. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-2, Ext 9-2, 9-3, 9-6, Ext 9-6	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

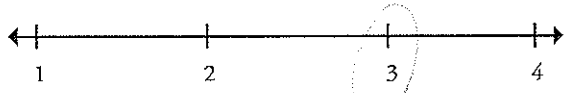
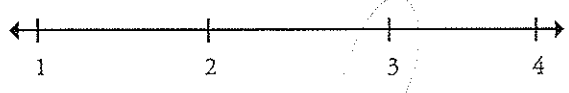
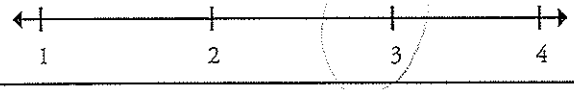
MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Chapter 7	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** Found
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

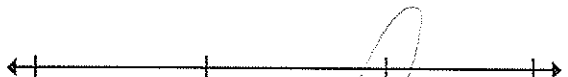
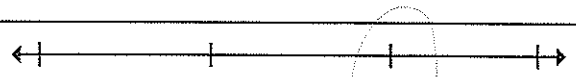
MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-3, 9-6, Ext 9-6, 10-1, 10-2, 10-4, Ext 10-4	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Use functions to model relationships between quantities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.F.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 4-3, 4-4, 9-3, 9-4, 9-5, Ext 9-5, 9-6 Ext 9-6, Classor 2	Important Mathematical Ideas Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

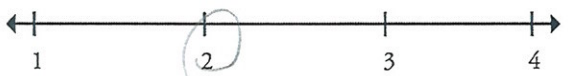
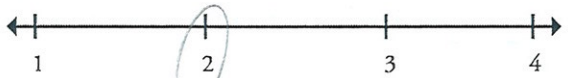
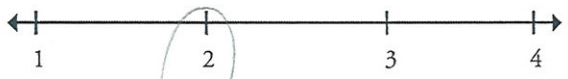
MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Use functions to model relationships between quantities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 4-3, Classon 9	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** Dub **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

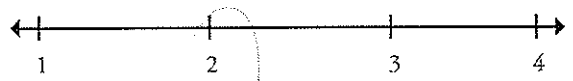
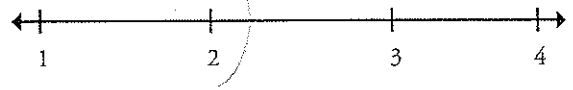
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.1a 1. Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and line segments to line segments of the same length. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C lessons 10 + 11	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** lines? Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

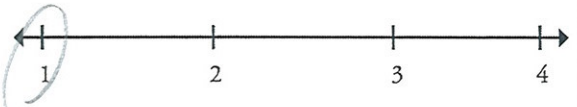
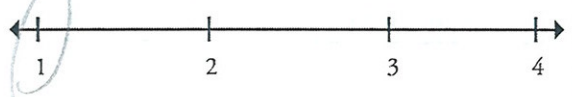
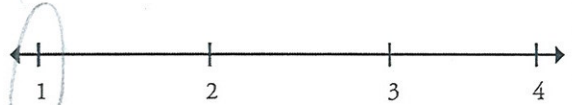
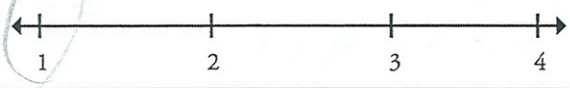
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.1b 1. Verify experimentally the properties of rotations, reflections, and translations: b. Angles are taken to angles of the same measure. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C Lesson 10 + 11	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Fund **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

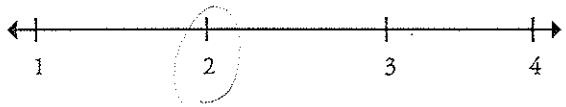
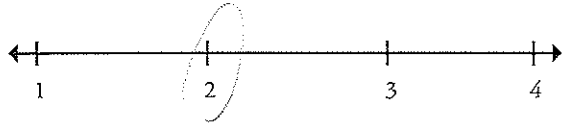
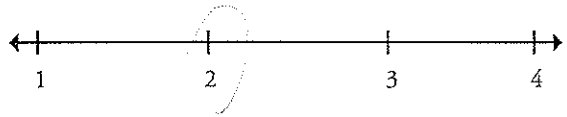
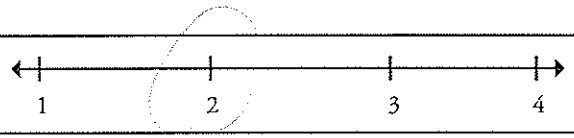
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.1c 1. Verify experimentally the properties of rotations, reflections, and translations: c. Parallel lines are taken to parallel lines. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C lessons 10 + 11	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Not found Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

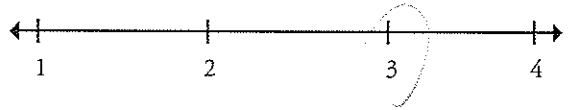
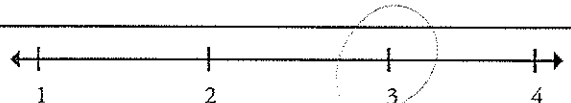
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 6-4, Ext 6-4, Lesson 1	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** — Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

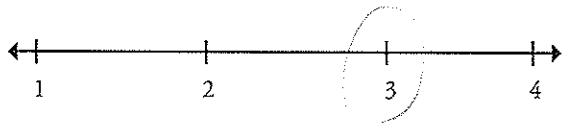
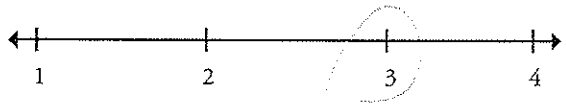
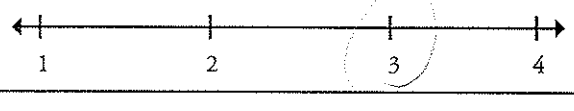
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 4-8, Ext 4-8, 6-6, 6-7, Lesson 12	Important Mathematical Ideas Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** — Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

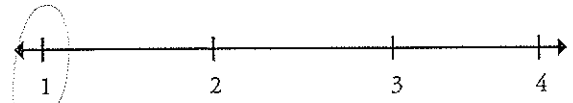
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 4-7, Ext 4-7, 4-8, C Lesson 13	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

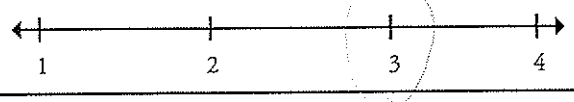
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 6-1, ~~6-4~~, Concepts + Skills Bank 5	Important Mathematical Ideas Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

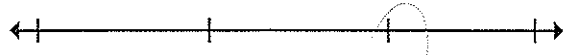
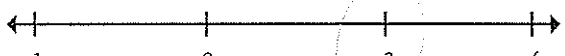
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand and apply the Pythagorean Theorem.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.6 Explain a proof of the Pythagorean Theorem and its converse. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C Lesson 14	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** Found
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

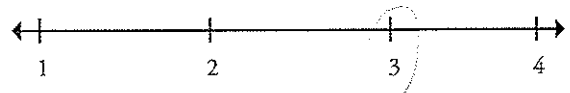
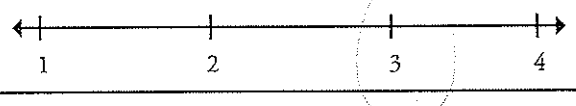
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** Found
Indicate the chapter(s), section(s), and/or page(s) reviewed. Exp 3-5, 3-5, 3-6	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 3-7	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

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Title of Instructional Materials: _____

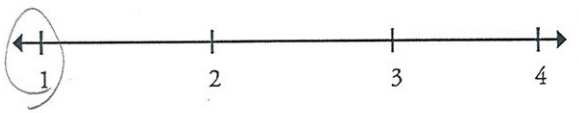
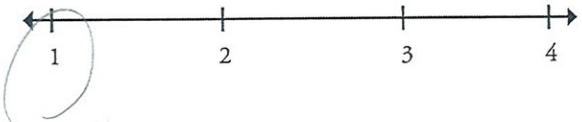
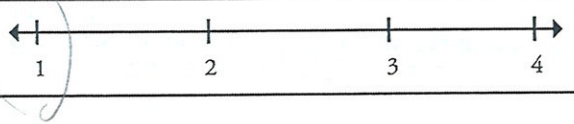
MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 7-5, 7-6 Exp 7.9 7.9 Concepts + Skills Bank 25	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

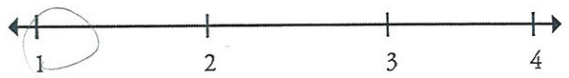
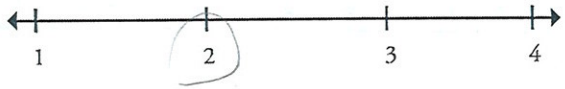
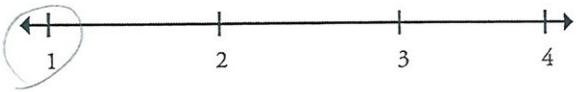
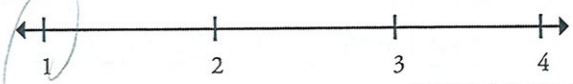
MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-8, 9-9, Ext 9-9, C lesson 15	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

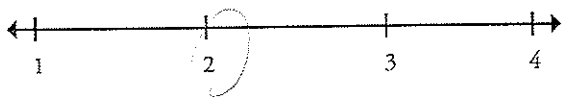
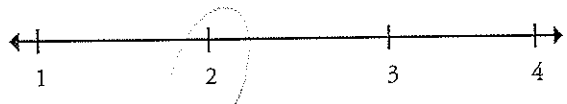
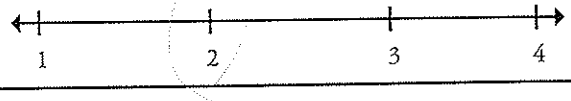
MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-9, Ext 9-9	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** First part of Standard found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

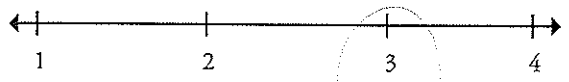
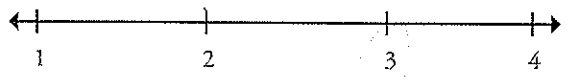
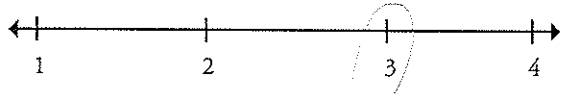
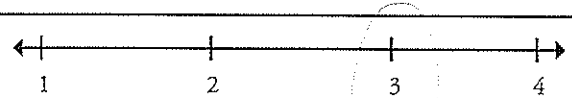
MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-9, Ext 9-9	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Found **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** — Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?* **Indicate the chapter(s), section(s), and/or page(s) reviewed.** C lesson 16	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Found
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

	MATHEMATICAL PRACTICES	Chapter/Section/Page				Summary/ Justification/Evidence	Missing pieces of Math Practice	Overall Rating
	1. Make sense of problems and persevere in solving them.							
	2. Reason abstractly and quantitatively.							
	3. Construct viable arguments and critique the reasoning of others.					"Find the Error"		4
	4. Model with mathematics.					lots of good examples		4
	5. Use appropriate tools strategically.							
	6. Attend to precision.							
	7. Look for and make use of structure.					Proofs		4
	8. Look for and express regularity in repeated reasoning.							
8.NS	**THE NUMBER SYSTEM**	Chapter/Section/Page	Important Math Ideas	Skills and Procedures	Math Relationships	Summary/ Justification/Evidence	Missing portions of Standards	Overall Rating
	Know that there are numbers that are not rational, and approximate them by rational numbers.							
8.NS.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeates eventually, and convert a decimal expansion which repeats eventually into a rational number.	p. 84-89 p. 155-159	4	4	4	GRE insects, sharks	—	4
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions	p. 148-151, 155-159, 172	4	4	4	GRE shell, buildings	—	4
8.EE	**EXPRESSIONS AND EQUATIONS**							
	Work with radicals and integer exponents.							
8.EE.1	Know and apply the properties of integer exponents to generate equivalent numberical expressions.	545-558	3	4	4		—	4
8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form x^2 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that square root of 2 is irrational.	144-151, 178 549-562	3	4	4		—	4
8.EE.3	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.	130-133 (CC) 5-11	4	4	4		—	4
8.EE.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. Interpret scientific notation that has been generated by technology.	(CC) 5-11	4	4	4	GRE-emails +technology	—	4
	Understand the connections between proportional relationships, lines, and linear equations.							
8.EE.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *Ex: compare a distance-time graph to a distance-time equations to determine which of two moving objects has greater speed.*	204-209 481-501	4	4	4	GRE-song downloads sale price, recipe...	—	4

(CC) = Common Core additions

GRE = good real-world examples

			Iden	Skill	Relationship	Summary	Missing	Overall
8.EE.6	Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation *y=mx* for a line through the origin and the equation *y=mx + b* for a line intercepting the vertical axis at *b*.	487-501 p. 493	4	4	4	GRE - printer, bike-a-thon, dog years, mpg	—	4
	Analyze and solve linear equations and pairs of simultaneous linear equations.							
8.EE.7a	Solve linear equations in one variable. A. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and be are different numbers).	65-73 119-123 422-437 A) CC 12-16	4	4	4	Using Properties in "Proof" form	—	4
8.EE.7b	Solve linear equations in one variable. B. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. (var. both sides)	119-123, 422-437 CC 12-21	4	4	4	GRE - cell phone (var. on both sides) 433 social networks	—	4
8.EE.8a	Analyze and solve pairs of simultaneous linear equations. A. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	502-507 CC 26	4	4	4	GRE - shipping rates	—	4
8.EE.8b	Analyze and solve pairs of simultaneous linear equations. B. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. Ex: 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 26 cannot simultaneously be 5 and 6.	CC 22-25	4	4	4	GRE - food, dollars, videogames	—	4
8.EE.8c	Analyze and solve pairs of simultaneous linear equations. C. Solve real-world and mathematical problems leading to two linear equations in two variables. *Ex: Given coordiantes for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*	502-507 CC 22-26	4	4	4	GRE - bicycling p. 506 Map p. 26 (cc)	—	4
	FUNCTIONS							
	Define, evaluate, and compare functions.							
8.F.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. *(Note: Function notation is not required in 8th grade.)*	469-480 495-501	4	4	4	GRE - DVD's bowling	—	4
8.F.2	Compare properties of two functions each represented in a different way (aggebraically, graphically, numerically in tables, or by verbal descriptions). *Ex: Given a linear function represented by a table of values and a linear function represented by an algebralic expression, determine which function has the greater rate of change.*	CC 27-32	4	4	4	GRE - texting animals, library fees	—	4
8.F.3	Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *Ex: The function A = s^2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9) which are not on a straight line.*	475-501 528-544 (nonlinear)	4	4	4		—	4
	Use functions to model relationships between quantitites.							
8.F.4	Construct a function to model a linear relationship between two quantities. Determine the reate of change and intial value of the function from a description of a relationship or from two (x,y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	198-209 475-501 CC 33-37	4	4	4	GRE - party supplies texting	—	4

8.F.5	Describe qualitatively the functional releationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. (rate of change)	198-203 CC 38-41	4	4	4		—	4
	GEOMETRY							
	Understand congruence and similarity using physical models, transparencies, or geometry software.							
8.G.1a	Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and the line segments to line segments of the same length.	CC 42-49	3	4	4		—	4
8.G.1b	Verify experimentally the properties of rotations, reflections, and translations: b. Angles are taken to angles of the same measure.	CC 42-49	3	4	4		—	4
8.G.1c	Verify experimentally the properties of rotations, reflections, and translations: c. Parallel lines are taken to parallel lines.	CC 42-49	3	4	4		—	4
8.G.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	320-325 CC 45-49	3	4	4		—	4
8.G.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	225-231 332-341 CC 50-54	4	4	4	GRE- dilation of eye p.227 spinning wheel - CC 50 frog, ski lift, fernsaked CC 53	—	4
8.G.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	218-230 CC 55-60	3	4	4		—	4
8.G.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *Ex: Arragnge three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*	306-313 737?	4	4	4	GRE - simple ex. straight-forward	—	4
	Understand and apply the Pythagorean Theorem.							
8.G.6	Explain a proof of the Pythagorean Theorem and its converse.	CC 61-63	2	3	3			3
8.G.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	161-171	4	4	4	use this as a proof, hyp = ramp p.168 - "rise, run" camp - p.169	—	4
8.G.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	173-177	3	4	4	GRE - maps	—	4
	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.							
8.G.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	373-384 397-404 741?	2	4	4	few real-life examples	—	3
	STATISTICS AND PROBABILITY							
	Investigate patterns of association in bivariate data.							
8.SP.1	Construct and interpret scatter plots for bivariate measurements data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	508-517 CC 64-66	4 / 2	4	4	height - arm span shoes size - height TV - exercise	—	4

8.SP.2	Know that straight lines are widely used to model relationsips between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	S10 - S17	3	4	4		—	4
8.SP.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *Ex: In a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*	S10 - S17	3	3	3	"bivariate" not in student text →		3
8.SP.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. ☆ Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or colums to describe possible association between the two variables. *Ex: Collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	CC 67-72	4	4	4	lots of examples	—	4

Montana Math Connects: Concepts, Skills Problem Solving, Course 3, A Pre-Algebra Course AND Math Connects to the CCSS Supplement

GLENCOE

3-4 STRONG

Glencoe McGraw-Hill
Course 3

	MATHEMATICAL PRACTICES	Chapter/Section/Page				Justification/ Evidence	pieces of Math	Overall Rating
	1. Make sense of problems and persevere in solving them.	Correlation Chart Provided with multiple examples						4
	2. Reason abstractly and quantitatively.	Correlation Chart Provided with multiple examples						4
	3. Construct viable arguments and critique the reasoning of others.	Correlation Chart Provided with multiple examples						4
	4. Model with mathematics.	Correlation Chart Provided with multiple examples						4
	5. Use appropriate tools strategically.	Correlation Chart Provided with multiple examples						4
	6. Attend to precision.	Correlation Chart Provided with multiple examples						4
	7. Look for and make use of structure.	Correlation Chart Provided with multiple examples						4
	8. Look for and express regularity in repeated reasoning.	Correlation Chart Provided with multiple examples						4
8.NS	**THE NUMBER SYSTEM**	Chapter/Section/Page	Important Math Ideas	Skills and Procedures	Math Relation-ships	Summary/ Justification/ Evidence	Missing portions of Standards	Overall Rating
	Know that there are numbers that are not rational, and approximate them by rational numbers.							
8.NS.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeates eventually, and convert a decimal expansion which repeats eventually into a rational number.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.EE	**EXPRESSIONS AND EQUATIONS**							
	Work with radicals and integer exponents.							
8.EE.1	Know and apply the properties of integer exponents to generate equivalent numberical expressions.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form x^2 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that square root of 2 is irrational.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.EE.3	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						

most appropriate for most districts

8.EE.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. Interpret scientific notation that has been generated by technology.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
	Understand the connections between proportional relationships, lines, and linear equations.	
8.EE.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *Ex: compare a distance-time graph to a distance-time equations to determine which of two moving objects has greater speed.*	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.EE.6	Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y=mx$ for a line through the origin and the equation $y=mx+b$ for a line intercepting the vertical axis at b.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
	Analyze and solve linear equations and pairs of simultaneous linear equations.	
8.EE.7a	Solve linear equations in one variable. A. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.EE.7b	Solve linear equations in one variable. B. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.EE.8a	Analyze and solve pairs of simultaneous linear equations. A. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.EE.8b	Analyze and solve pairs of simultaneous linear equations. B. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. Ex: 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 26 cannot simultaneously be 5 and 6.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.EE.8c	Analyze and solve pairs of simultaneous linear equations. C. Solve real-world and mathematical problems leading to two linear equations in two variables. *Ex: Given coordiantes for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
	FUNCTIONS	
	Define, evaluate, and compare functions.	

8.F.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. *(Note: Function notation is not required in 8th grade.)*	9.2, Extend 9.2, 9.3, 9.6, Extend 9.6	4	4	4			4
8.F.2	Compare properties of two functions each represented in a different way (aggebraically, graphically, numerically in tables, or by verbal descriptions). *Ex: Given a linear function represented by a table of values and a linear function represented by an algebralic expression, determine which function has the greater rate of change.*	CCSS Lesson 7	4	4	4			4
8.F.3	Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *Ex: The function A = s^2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9) which are not on a straight line.*	9.3, 9.6, Extend 9.6, 10.1, 10.2, 10.4, Extend 10.4	4	4	4			4
	Use functions to model relationships between quantitites.		4	4	4			4
8.F.4	Construct a function to model a linear relationship between two quantities. Determine the reate of change and intial value of the function from a description of a relationship or from two (x,y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	4.3, 4.4, 9.3, 9.4, 9.5, Extend 9.5, 9.6, Extend 9.6, CCSS Lesson 8	4	4	4			4
8.F.5	Describe qualitatively the functional releationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Lesson 4.3 and CCSS Lesson 9						
	GEOMETRY							
	Understand congruence and similarity using physical models, transparencies, or geometry software.							
8.G.1a	Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and the line segments to line segments of the same length.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.G.1b	Verify experimentally the properties of rotations, reflections, and translations: b. Angles are taken to angles of the same measure.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.G.1c	Verify experimentally the properties of rotations, reflections, and translations: c. Parallel lines are taken to parallel lines.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.G.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						
8.G.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						

8.G.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.G.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *Ex: Arragnge three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
	Understand and apply the Pythagorean Theorem.	
8.G.6	Explain a proof of the Pythagorean Theorem and its converse.	
8.G.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.G.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	
8.G.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
	STATISTICS AND PROBABILITY	
	Investigate patterns of association in bivariate data.	
8.SP.1	Construct and interpret scatter plots for bivariate measurements data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.SP.2	Know that straight lines are widely used to model relationsips between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	All lessons are listed in Correlated to Math Connects, Crs 3 Chart
8.SP.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *Ex: In a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*	All lessons are listed in Correlated to Math Connects, Crs 3 Chart

8.SP.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or colums to describe possible association between the two variables. *Ex: Collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	All lessons are listed in Correlated to Math Connects, Crs 3 Chart						

INDIANA'S EDUCATION ROUNDTABLE | 20 10

Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Grade 8

a project of
The Charles A. Dana Center at the University of Texas at Austin

Glencoe / McGraw-Hill
Indiana Math Connects
Course 3 8th Grade

Instructional Materials Analysis and Selection
Phase 3:
Assessing Content Alignment to the Common Core State Standards for Mathematics

A project of
The Indiana Education Roundtable, The Indiana Department of Education,
and
The Charles A. Dana Center at The University of Texas at Austin

2010–2011

Instructional Materials Analysis and Selection
Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the *Common Core State Standards for Mathematics* so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase *Instructional Materials Analysis and Selection* toolset: Phase 1: *Studying the Standards*, Phase 2: *Narrowing the Field of Instructional Materials*, Phase 3: *Assessing Subject-Area Content Alignment*, and Phase 4: *Assessing Vertical Alignment of Instructional Materials*. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the *Common Core State Standards for Mathematics*. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's *Academic Standards for Mathematics*.

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About the development of this resource

This tool, *Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics*, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dana Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II, and one each for the three courses in the integrated high school pathway Mathematics I, Mathematics II, and Mathematics III).* At the request of various states and other entities, the Dana Center has populated this *Instructional Materials Analysis and Selection* tool with standards from the *Common Core State Standards for Mathematics* for use by local districts in selecting instructional materials aligned with these standards.

Note that the copyright of the *Common Core State Standards for Mathematics* is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, available at www.corestandards.org/terms-of-use. Specifically, this work is done under the Terms of Use "non-exclusive, royalty-free license to copy, publish, distribute, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the *Common Core State Standards for Mathematics* as well as the *CCSS for Mathematics, Appendix A: Designing high school mathematics courses based on the Common Core State Standards*, go to www.corestandards.org/the-standards.

October 2010 release.

We welcome your comments and suggestions for improvements—please send to dana-tushop@utlists.utexas.edu or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K–16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues, creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at www.utdanacenter.org. To access our resources (many of them free), see our products index at www.utdanacenter.org/products. And to learn more about our professional development—and sign up online—go to www.utdanacenter.org/pd.

* For the high school course sequences, we relied on the *Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards*, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Acknowledgments

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Sam Zigrossi, senior advisor

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Introduction

Phase 1: **Studying the Standards**

Phase 2: **Narrowing the Field of Instructional Materials**

Phase 3: **Assessing Mathematical Content Alignment**

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality…). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

1. Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
2. Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards.
3. In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
4. Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea.
5. Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected materials.

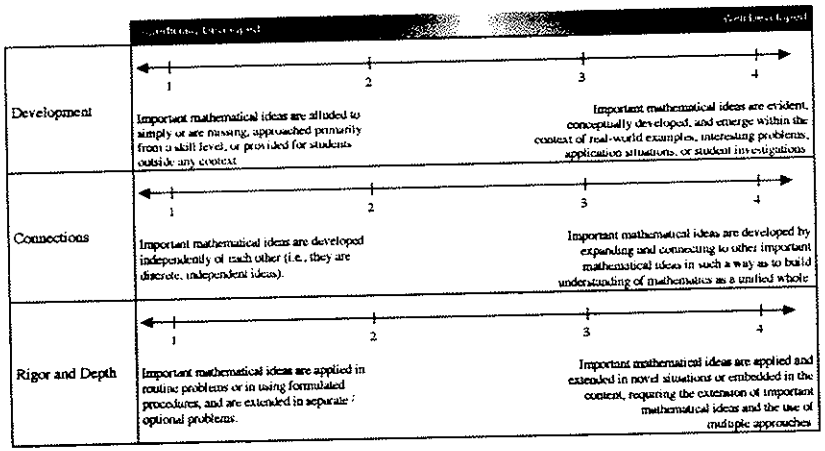
6. Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course. If the group size is large, more areas, topics, big ideas can be examined within each grade level course.
7. Make sure committee members have multiple copies of the Phase 3 rubric.
8. Committee members apply the Phase 3 rubric for each of the materials.
9. Establish a time line for groups to complete and submit Phase 3 documentation.
10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

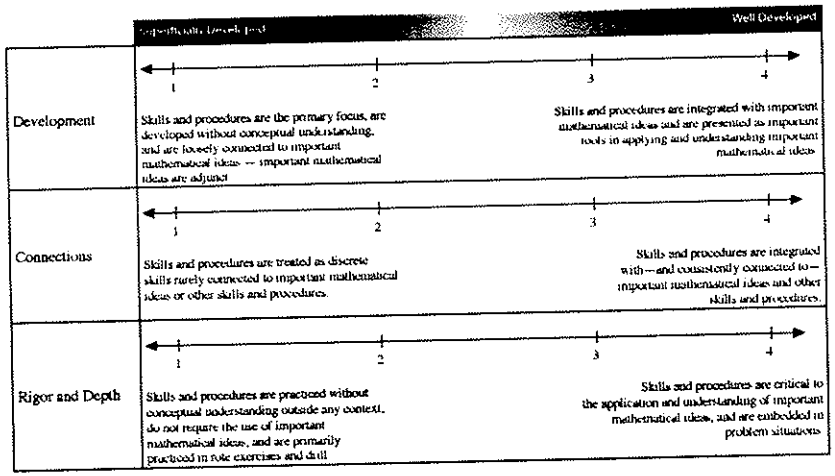
- Phase 3: Assessing Mathematical Content Alignment black line master — multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Phase 4: **Assessing Vertical Alignment of Instructional Materials**

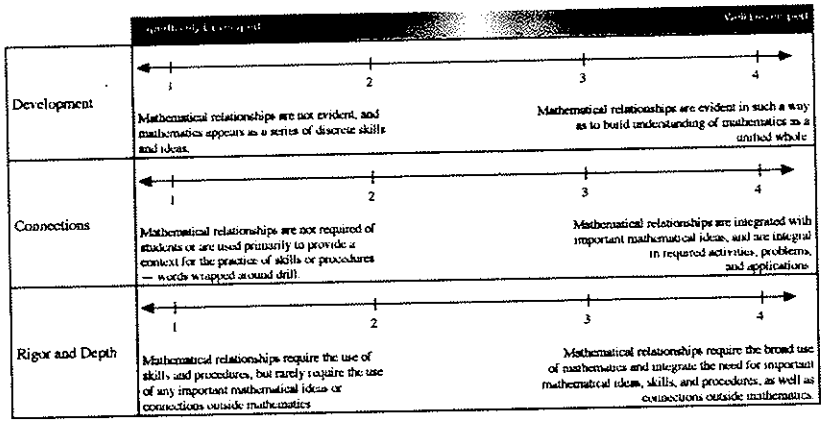
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Problems, in general, are well developed & clear. "Real-world" aspects clear to reader, and text reminds student of its resources each section in case difficulty arises. Consider adding a mention of local resources & RHIT Hw Help Shop

Indicate the chapter(s), section(s), or page(s) reviewed: Ch 3

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Since this is an IN edition.

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

The use of visuals & alg. tiles are great for student comprehension. The properties of equality & inequality are simply told to the students, instead of developed by the students.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 8

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

They'll find the error ~~type~~ problems are good, but there isn't enough of them throughout the text. There is also not enough "write about math" questions & problems where students are asked to justify themselves.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 4

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Use of Alg. tiles is good. writing eqns section was good use of critical thinking skills.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 1

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Text encourages use of its online resources throughout. Several activities require or heavily use calculators & spreadsheets.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 2

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

The markings, symbols & definitions are clear.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Once students master area formulae, 3D figures volume & SA can be developed intuitively. Text does a decent job about this.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 7

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through $(1, 2)$ with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Development of experimental & theoretical good because of use of labs.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch 12

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – THE NUMBER SYSTEM – 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.NS.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. 1 example is given to address this standard. Students are told how to do it, but not why. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 2.1	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – THE NUMBER SYSTEM – 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.

8.NS.2

Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*

Good tie in w/ $\frac{1 \pm \sqrt{5}}{2}$. Section needs ~~more~~ practice problems w/ # line already partially filled out so they can cont. to ~~[illegible]~~ order & compare Q^*.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

The Charles A. Dana Center

15

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.

8.EE.1

Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, $3^2 \times 3^{-4} = 3^{-3} = 1/3^3 = 1/27$.*

There is only 1 ex. prob. dealing w/ $x^{-n} = \frac{1}{x^n}$, but 25% of problems address this exp. rule.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

Fair? No. Furthermore, the text doesn't show why this rule is true (or even hint @ it)

Ch 2

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

The Charles A. Dana Center

16

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.

8.EE.2

Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.

Potentially confusion section. Ex. on pg 145

$t^2 = 169$

$t = \pm\sqrt{169}$ Def of $\sqrt{\ }$

Indicate the chapter(s), section(s), and/or page(s) reviewed.

Text does poor job explaining why ± sign appears.

3-1

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

The Charles A. Dana Center

17

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.

8.EE.3

Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.*

Does not include discussion about estimating #s in scientific notation.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

2-10

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

The Charles A. Dana Center

18

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Work with radicals and integer exponents.

8.EE.4

Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

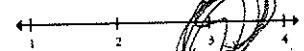
Good Summary charts on how to convert to Scientific notation & story more real-life apps are desired. Equations were not used in this section

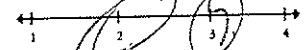
Indicate the chapter(s), section(s), and/or page(s) reviewed.

2.10

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

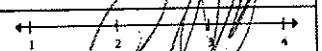
Important Mathematical Ideas

Skills and Procedures 

Mathematical Relationships 

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Understand the connections between proportional relationships, lines, and linear equations.

8.EE.5

Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*

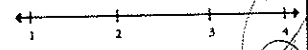
Good graphics. Examples & problems relate to student interest.

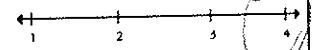
Indicate the chapter(s), section(s), and/or page(s) reviewed.

4.3

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas

Skills and Procedures 

Mathematical Relationships 

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Understand the connections between proportional relationships, lines, and linear equations.

8.EE.6

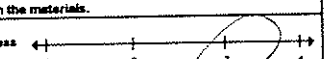
Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b

Students are never asked or encouraged to develop $y = mx$ or $y = mx + b$. They are just told what it is.

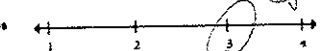
Indicate the chapter(s), section(s), and/or page(s) reviewed.

Ch 9

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

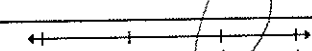
Important Mathematical Ideas 

Skills and Procedures

Mathematical Relationships 

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating 

Reviewed By _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.

8.EE.7a

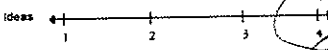
7. Solve linear equations in one variable.
   a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).

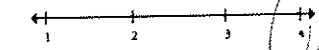
Nice visual Alg. Lab w/ details. Good step by step examples w/ connection to real-world. Should include another [illegible] coding info on pg 435. Needs more connection to other math topics

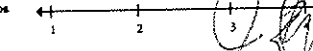
Indicate the chapter(s), section(s), and/or page(s) reviewed.

8-4

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas 

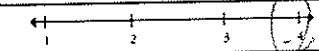
Skills and Procedures 

Mathematical Relationships 

Summary / Justification / Evidence

Start problem example w/ color

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.

8.EE.7b

7. Solve linear equations in one variable.
   b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

8-1 is simplifying expressions, but 8-2 doesn't incorporate skills mastered in previous section very well.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

8-1 & 8-2

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.

8.EE.8a

8. Analyze and solve pairs of simultaneous linear equations.
   a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

Good graphical & algebraic drawings. See comment about Soln's.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.

8.EE.8b

8. Analyze and solve pairs of simultaneous linear equations.
   b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.*

More emphasis needed as to what a soln is and what it's impact is on a real-life problem.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

9-7

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations.

8.EE.8c

8. Analyze and solve pairs of simultaneous linear equations.
   c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*

The topics of the real-world problems are slanted towards girls, not that is a bad thing, but some more problems that boys might like would be great.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.[1] Good use of color coding Ex $f(x) = \frac{x}{3} - \frac{5}{3}$, if $x=9$ Good use of scaffolding 1 Function notation is not required in Grade 8. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** by incorporating charts 9.2 More practice problems	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** into practice problems. **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** word problems, mixed (in particular, story problems). Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.* Good use of tables but severely lacking graphical portion. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-2	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.* Good balance of tables & graphs, but not problems ex. showing nonlinear f(x) **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-3	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Use functions to model relationships between quantities.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. Need more problems like #23-25 in this section. Extend 9.6 ? **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9.5 - 9.6	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** good aspect, but not all schools have access to that **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Kind of tech. Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – FUNCTIONS – 8.F

Use functions to model relationships between quantities.

8.F.5

Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

Need more examples & problems similar to this. The objects contained in the domain

Indicate the chapter(s), section(s), and/or page(s) reviewed.

Extend 9.2

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

have been & cg domain could be better selections for m.s. students.

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.

8.G.1a

1. Verify experimentally the properties of rotations, reflections, and translations:
   a. Lines are taken to lines, and line segments to line segments of the same length.

Well done section.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

6.6 – 6.7

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.

8.G.1b

1. Verify experimentally the properties of rotations, reflections, and translations:
   b. Angles are taken to angles of the same measure.

Angle measure preservation was not explicitly monitored in text.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

6.6 – 6.7

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.

8.G.1c

1. Verify experimentally the properties of rotations, reflections, and translations:
   c. Parallel lines are taken to parallel lines.

Some of the example problems address this, but some of the problem imply this happens.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

6.6 – 6.7

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas: 1 2 3 4

Skills and Procedures: 1 2 3 4

Mathematical Relationships: 1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. Since "Congruent Polygons" comes before translations & rotations sections (6.5 & 6.6), the text failed to meet this standard. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 6.4.	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. Good use of coordinate pts & how they are impacted by reflections & translations. Dilations are not discussed in this ch 6. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 6.5 & 6.6	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. Good art & insert problems. Else wise, it is the dull textbook presentation of similarity. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 6.4	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.* Good use of building up students' skills, confidence & abstraction abilities. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Extend 6.1	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.6 Explain a proof of the Pythagorean Theorem and its converse. 4 hands-on activity is offered prior to formal discussion; students make a conjecture, but do not actually prove it w/ this activity Explore 3-5 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 **3** 4 Skills and Procedures: 1 **2** 3 4 Mathematical Relationships: 1 **2** 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 **2** 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. Diverse applications & problem contexts; however for being "real-life," shouldn't there be decimals & fractions? 3.6 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 **3** 4 Skills and Procedures: 1 2 3 **4** Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 **3** 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. Good. Nothing to spectacular to comment on. 3.7 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 **3** 4 Skills and Procedures: 1 2 **3** 4 Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 **3** 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. Explore 7.7 good... should do ~~the~~ something similar to this for V & SA for cylinders & rect. prisms. 7.5 – 7.7 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 **3** 4 Skills and Procedures: 1 2 **3** 4 Mathematical Relationships: 1 2 **3** 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 **3** 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. Not present **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 11	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. Not present **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 11	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height* Not addressed **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 11	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

MATHEMATICS: GRADE 8 – STATISTICS AND PROBABILITY – 8.SP

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?* Not present **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 11	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4